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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,800	12/17/2001	Katsumi Tada	ASA-1046	7410

7590 04/06/2005

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EXAMINER

NGUYEN, CINDY

ART UNIT PAPER NUMBER

2161

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/015,800	Applicant(s) TADA ET AL.	
	Examiner Cindy Nguyen	Art Unit 2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1-10, 12 and 16-20 is/are allowed.
- 6) ☒ Claim(s) 11, 13-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is in response to amendment filed 01/19/05.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Regarding claim 11, the phrase "selecting between how to execute" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

1. *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 11 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itonori et al. (U.S 5943443) (Itonori) in view of Yamagata et al. (US 5048113) (Yamagata) and further in view of Kubota (U.S 6041323).

Regarding claim 11, Itonori discloses: In a system for retrieving a document containing a search character string specified by an operator in a search through text documents that are produced by performing character recognition processing on image

documents (col. 2, lines 51 to col. 3, lines 19, Itonori), a search character string expanding method comprising:

search term expansion method switching step of calculating a length of the search character string and selecting between how to execute generating of expanded words between expanded word generation methods according to the search character string length (col. 32, lines 21-43, Itonori). However, Itonori didn't disclose: wherein said expended word generation methods include a method of adjusting the number of expanded search character strings. On the other hand, Kubota discloses: wherein said expended word generation methods include a method of adjusting the number of expanded search character strings (col. 15, lines 13-50, Kubota). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include the step for expanding character strings generated is adjusted according to the search character string length in the system of Itonori as taught by Kubota. The motivation being to enable to fit the length value during searching character string for the expansion decision according to the kind of characters in languages.

Regarding claim 13, all the limitations of this claim have been noted in the rejection of claim 11 above. In addition, Itonori/ Kubota discloses: wherein whether the expanded words are generated or not is determined according to the search character string length (col. 22, lines 52-61, Itonori).

Regarding claim 14, all the limitations of this claim have been noted in the rejection of claim 13 above. In addition, Itonori/ Kubota disclose: wherein setting

Art Unit: 2161

information is provided for selecting between the expanded word generation methods (col. 32, lines 21-43, Itonori).

Regarding claim 15, all the limitations of this claim have been noted in the rejection of claim 14 above. In addition, Itonori/ Kubota discloses: a text search step of executing a search by using as a search condition a logical sum of expanded search character strings obtained by the search character string expansion (col. 15, lines 40-50, Kubota).

Allowable Subject Matter

Claims 1-10, 12 and 16-20 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fail to suggest a an apparatus and a program read into and running on a computer to expand a character string, wherein the character string is entered to search image information of documents the program comprising: a similarity table previously storing groups of similar partial character strings, each of the groups of similar partial character strings each consisting of a plurality of characters and arranged in an order of magnitude of their emergence probabilities in each group, each of the groups of similar partial character strings being divided from each of the plurality of partial character strings obtained from the character string dividing device by changing at least one of characters of each partial character string to a different character with is similar in shape as recited in claims 1 and 16.

the prior art of record fail to suggest a system for retrieving a document containing a search character string specified by an operator in a search text

Art Unit: 2161

documents that are produced by performing character recognition processing on image documents, a search character string expanding method comprising: a similarity table referencing step of checking the n-character partial character strings (n greater/equal 2) against an n-character-based similarity table, the n-character-based similarity table being generated in advance by storing character strings of similar character shapes that are highly likely to be erroneously recognized, each consisting of a plurality of characters and arranged in an order of magnitude of their emergence probabilities in each group as recited in claim 6.

As per claims 1-5, 7-10, 12 and 17-20, all the limitations of these claims have been noted in the rejection of claims 1, 6 and 16 above, respectively. It is therefore allowed

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2161

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S-5581752, Electronic document retrieval and display system and method of retrieving electronically stored documents.

U.S-5987460, Document retrieval assisting method and system for the same and document retrieval service using the same with document frequency and term frequency.

US-6173253, Sentence processing apparatus and method thereof utilizing dictionaries to interpolate elliptic characters or symbols.

US-5991755, Documents retrieval system for retrieving a necessary document.

US-5680612 , Document retrieval apparatus retrieving document data using calculated record identifier.

U.S-6473754, Method and system for extracting characteristic, method and system for searching for relevant document using the same, storage medium for storing characteristic string extraction program, and storage medium for storing relevant document searching program.


U.S-5469354, Document data processing method and apparatus for document retrieval.

3. Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cindy Nguyen whose telephone number is 571-272-4025. The examiner can normally be reached on M-F: 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.


Cindy Nguyen
March 30, 2005


FRANTZ COBY
PRIMARY EXAMINER